

CLAIMS

1. Turbomachine (100, 200) comprising a casing (1402), a rotor (4), and a plurality of cooled ring segments (108, 208) situated between said casing (102) and said rotor (4), each ring sector (108, 208) comprising a main cooling cavity (162, 166, 262) and being attached to the turbine casing (102) by means of fastening devices (132, 232) characterised in that the fastening devices (132, 232) comprise a clamping screw (134, 234) positioned more or less radially and pinning the ring segment (108, 208) against said casing (102), and in that the said clamping screw (134, 234) is crossed through by a cooling airway (174, 274) that communicates with said main cooling cavity (162, 166, 262) of the ring segment (108, 208).

2. Turbomachine (100, 200) according to claim 1, characterised in that for each ring segment (108, 208) said clamping screw (134, 234) is crossed longitudinally by a single cooling airway (174, 274).

3. Turbomachine (100, 200) according to claim 1 or claim 2, characterised in that for each ring segment (108, 208) the fastening devices (132, 232) comprise a spacer (136) mounted on the casing (102) and through which the clamping screw (134, 234) passes, said spacer (136) serving to position the ring segment (108, 208) axially and tangentially relative to the casing.

4. Turbomachine (100, 200) according to claim 3, characterised in that for each ring segment (108, 208) said spacer (136) has an internal diameter that is more or less equal to an external diameter of at least a section (138, 238) of said clamping screw situated opposite the spacer (136).

5. Turbomachine (100, 200) according to claim 3 or claim 4, characterised in that for each ring segment (108, 208) said spacer (136) comprises a lower extremity (136a) inserted in a hole (144) bored in said ring segment (108, 208), this lower extremity (136a) having an external diameter more or less equal to an internal diameter of said hole (144).

6. Turbomachine (100, 200) according to claims 3 to 5, characterised in that for each ring segment (108, 208) said spacer (136) constituted a limit stop for said ring segment (108, 208), in such a way as to position it radially with respect to the casing (102).

7. Turbomachine (100, 200) according to any one of claims 3 to 6, characterised in that each ring segment (108) comprises a threaded section (141) cooperating with said clamping screw (134), the head (140) of this clamping screw (134) bearing against an upper extremity (136b) of the spacer (136).

8. Turbomachine (100, 200) according to any one of claims 3 to 6, characterised in that each

ring segment (208) comprises a recess (276) against the bottom of which bears the head (240) of said clamping screw (234), this clamping screw cooperating with a nut (278) bearing against an upper extremity (136b) of the spacer (136).

9. Turbomachine (100, 200) according to any one of the preceding claims, characterised in that each ring segment (108, 208) comprises an upstream extremity as well as a downstream extremity, said upstream extremity being in contact with an upstream circular rim (152) belonging to the casing (102), and said downstream extremity being in contact with a downstream circular rim (154) belonging to the same casing (102).

10. Turbomachine (100, 200) according to any one of the preceding claims, characterised in that each ring segment (108, 208) also comprises a secondary cooling cavity (172) separated from said main cooling cavity (168) by a panel, said main and secondary cavities (166, 172) being radially superimposed.

11. Turbomachine (100, 200) according to any one of the preceding claims, characterised in that the ring segments (108, 208) are connected together by means of sealing strips (156).

12. Turbomachine (100, 200) according to any one of the preceding claims, characterised in that said casing (102) is a turbine casing and that said rotor (4) is a turbine rotor.